GatesLearjet

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TO: Holders of Model 25B/C/D/F Maintenance Manual

SUBJECT: Revision No. 23 dated March 13, 1987

Revision No. 23 revises Chapter 5 only.

Revise this chapter by inserting changed pages and removing superseded pages in accordance with the LIST OF EFFECTIVE PAGES. Direct any questions concerning distribution (change in address, quantities, etc.) to Gates Learjet Corporation, P.O. Box 7707, Wichita, Kansas 67277-7707. Att: Technical Data Control Center, MS 71. Telephone (316) 946-2393.

Chuck Scott
Manager,
Technical Publications

GATES LEARJET 25b/c/d/f

maintenance manual



December 2, 1977
Revised March 13, 1987 (Rev. 23)

Gates Learjet Corporation

P.O. BOX 7707, MID-CONTINENT AIRPORT, WICHITA, KANSAS 67277-7707

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MODEL 25B/C/D/F RECORD OF REVISIONS

Rev No.	Issue Date	Insertion Date	By	Rev No.	Issue Date	Insertion Date	By	Rev No.	Issue Date	Insertion Date	By
Reprinted Dec/81 Thru Revision No. 10											
11	Dec 18/81										
12	Feb 5/82										
13	Apr 2/82										
14	Apr 30/82										
15	Aug 6/82										
16	Dec 10/82										
17	Jul 5/83										
18	Apr 27/84										
19	May 25/84										
20	Jul 16/84										
21	Dec 6/85										
22	Nov 21/86										
23	Mar 13/87										

RETAIN THIS RECORD IN THE FRONT OF MANUAL. ON RECEIPT OF REVISIONS, INSERT REVISED PAGES IN THE MANUAL, AND ENTER REVISION NUMBER, ISSUE DATE, INSERTION DATE, AND INITIALS.

Chapter Section Subject	Page	Date
*Introduction — List of Effective Pages	1	May 25/84
Introduction	i	Dec 2/77
Introduction	ii	Dec 2/77
Introduction	iii	Dec 2/77
Introduction	iv	Dec 2/77
Introduction	v	Dec 2/77
Introduction	vi	Dec 5/77
*Introduction	vii	May 25/84
*Introduction	viii	May 25/84

Chapter Section Subject	Page	Date

Insert Latest Revised Pages; Destroy Superseded or Deleted Pages.
*Asterisk indicates pages revised, added or deleted by current revision.
The portion of the text affected by the current revision is indicated by a vertical line in the outer margin of the page.

INTRODUCTION

1. Coverage
 A. This maintenance manual has been prepared by the Technical Publications Section of GATES LEARJET CORPORATION. It contains information necessary to enable a trained mechanic to service, trouble shoot, functionally test, and repair systems and equipment in the LEARJET. It also includes information necessary for the mechanic to perform maintenance or make minor repair to units in the aircraft normally requiring such action on the flight line or in the maintenance hangar. It covers the standard aircraft configuration as delivered to the customer.
 B. This maintenance manual does not reflect part numbers and should not be used for ordering replacement parts. Spares and replacement parts should be ordered using the current GATES LEARJET PARTS CATALOG.

2. Temporary Revisions
 A. Temporary revisions are used to provide additional information and changes as they become available. Temporary revisions provide, with the least possible delay, new information which assists in maintaining safe and efficient flight/ground operations.
 B. Temporary revisions are incorporated at the next regularly scheduled revision and become a permanent part of the maintenance manual.
 C. Upon receipt of a temporary revision it should be filed in the applicable chapter in accordance with its filing instructions.
 D. Temporary revisions should be removed from this maintenance manual only when removal instructions are noted on the regular revision cover letter or by instructions noted on a superseding temporary revision.

3. Serialization
 A. Serial numbers are placed in the effectivity block in the lower left corner of each page and denote that the maintenance data on that individual page relates to the listed serial number on that page.

4. Using the Maintenance Manual
 A. This maintenance manual is divided into four major sections, each of which is separated into chapters. Each chapter contains its own effectivity page and table of contents.
 B. Maintenance Manual division is as follows:

Major Section 1 - Aircraft General

Chapter	Title
4	Airworthiness Limitations
5	Time Limits/Maintenance Checks
6	Dimensions and Areas
7	Lifting and Shoring
8	Leveling and Weighing
9	Towing and Taxiing

Chapter	Title
10	Parking and Mooring
11	Required Placards
12	Servicing

Major Section 2 - Airframe Systems

Chapter	Title
20	Standard Practices - Airframe
21	Air Conditioning
22	Auto Flight
23	Communications
24	Electrical Power
25	Equipment/Furnishings
26	Fire Protection
27	Flight Controls
28	Fuel
29	Hydraulic Power
30	Ice and Rain Protection
31	Indicating/Recording Systems
32	Landing Gear
33	Lights
34	Navigation
35	Oxygen
36	Pneumatic
37	Vacuum
38	Water/Waste
39	Electrical/Electronic Panels & Multipurpose Parts

Major Section 3 - Structures

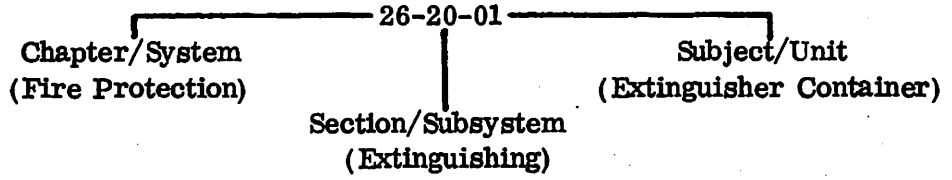
Chapter	Title
51	Structures
52	Doors
53	Fuselage
54	Nacelles/Pylons
55	Stabilizers
56	Windows
57	Wings

Major Section 4 - Power Plant

Chapter	Title
71	Power Plant
73	Engine Fuel and Control
74	Ignition
76	Engine Controls
77	Engine Indicating
78	Exhaust
79	Oil
80	Starting

C. Page Numbering System

(1) Page numbers used in this maintenance manual consist of three-element numbers separated by dashes, under which the page number and date are printed.



(2) Whenever the chapter/system element number is followed by zeros in the section/subsystem and subject/unit positions (26-00-00) the information is applicable to the entire system.

(3) Whenever the section/subsystem element number is followed by zeros in the subject/unit position (26-20-00) the information is applicable to the subsystems within the system.

(4) The subject/unit element number is used to identify information applicable to units within. The subject/unit element number progresses from the number -01 in accordance with the number of subsystem units covered.

(5) All system/subsystem/unit data is separated into specific types of information. Blocks of page numbers are used to identify the type of information:

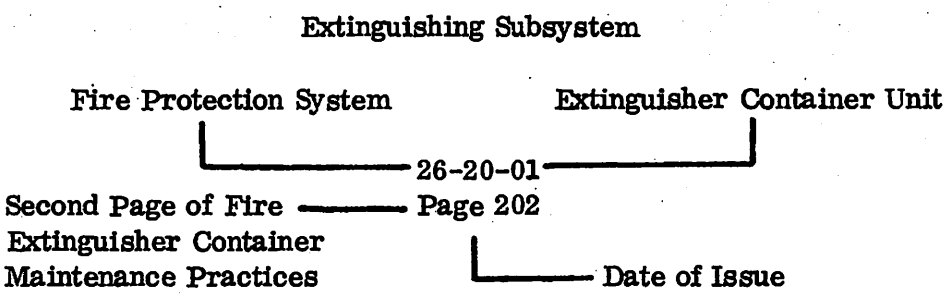
Pages 1 thru 100 - Description and Operation

Pages 101 thru 200 - Troubleshooting

Pages 201 thru 300 - Maintenance Practices

(6) Some units may not require all the information listed in these three blocks of numbers, in which case those blocks of numbers are omitted.

(7) The following is a breakdown of a typical page number:



(8) Illustrations use the same figure number as the page block in which they appear. As an example figure 202 will be the second illustration appearing in the maintenance practices section.

5. Revision Filing Instructions
 A. Each regular maintenance manual revision will include a cover letter. The cover letter will include a list of temporary revisions which are incorporated and any other pertinent information concerning this revision.
 B. Pages are listed in manual sequence by chapters/section/subject number and page block.

6. Revision Bars
 A. Changes to data in an existing section will be identified by a revision bar in the outer margin of the page.

7. Supplementary Publications
 A. The following list of publications provide servicing, overhaul, and parts information on various components on the Learjet. You may want to obtain these documents from the companies listed below to supplement the Learjet Manuals. Since a wide variety of radio equipment is available and because radio manufacturer's normally supply parts and servicing manuals with each set, radio publications have not been included. As publications on additional components become available, they will be added to this list. Basic issues of Jet Electronics and Technology, Inc., publications should be obtained at Gates Learjet Corporation and the Revision Service from J. E. T. in Grand Rapids, Michigan.
 (1) Anti-Ice
 (a) Installation and Maintenance Instructions, Electro-Thermal Ice Guards, Publication No.: AP-343; The Goodyear Tire and Rubber Company, Aviation Products Division, 1144 E. Market St., Akron, Ohio 44305.
 (2) Avionics
 (a) Instruction Manual, Directisyn, Model DN-101, Publication No.: TP-212; Jet Electronics and Technology, Inc., 5353 52nd Street, S. E.; Grand Rapids, Michigan 49508
 (b) Overhaul Manual and Parts Breakdown, Directional Gyro (Part No. 4-8020 for DN-101 Directisyn), Publication No. TP-233; Jet Electronics and Technology, Inc., 5353 52nd Street, S. E.; Grand Rapids, Michigan 49508
 (c) Overhaul Manual and Parts Breakdown, Directional Gyro (Part No. 501-1149 for DN-101 Directisyn), Publication No. TP-255; Jet Electronics and Technology, Inc., 5353 52nd Street, S. E.; Grand Rapids, Michigan 49508
 (d) Maintenance Manual, INS-61B Inertial Navigation System - Publications No. 523-0763768-201114, Collins Radio Company.
 (e) Operations Manual, INS-61B Inertial Navigation System - Publications No. 523-0764097-101111, Collins Radio Company.
 (f) Instruction Manual, Vertisyn, Model VN-202, Publication No.: TP-213; Jet Electronics and Technology, Inc., 5353 52nd Street, S. E.; Grand Rapids, Michigan 49508.

(g) Overhaul Manual and Parts Breakdown, Vertical Gyro (Part No. 501-1005 for VN-202 Vertisyn), Publications No. TP-234; Jet Electronics and Technology, Inc., 5353 52nd Street, S. E.; Grand Rapids, Michigan 49508.

(h) Overhaul Manual and Parts Breakdown, Vertical Gyro Indicator, Model VG-301, Publications No.: TP-232; Jet Electronics and Technology, Inc., 5353 52nd Street, S. E.; Grand Rapids, Michigan 49508.

(i) Instruction Manual, Vertical Gyro Indicator, Model VG-301, Publication No.: TP-214; Jet Electronics and Technology, Inc., 5353 52nd Street S. E. Grand Rapids, Michigan 49508.

(j) Overhaul Manual and Parts Breakdown, Attitude Indicator, Model AI-804, Publication No.: TP-218; Jet Electronics and Technology, Inc., 5353 52nd Street, S. E.; Grand Rapids, Michigan 49508.

(k) Overhaul Manual and Parts Breakdown, Attitude Indicator, Model AI-904, Publication No.: TP-216; Jet Electronics and Technology, Inc., 5353 52nd Street, S. E.; Grand Rapids, Michigan 49508.

(l) Instruction Manual, Automatic Flight Control System, Model FC-110 A thru H, Publication No.: TP-203; Jet Electronics and Technology, Inc.: 5353 52nd Street, S. E.; Grand Rapids, Michigan 49508.

(m) Instruction Manual, Automatic Flight Control System, Model FC-110 H and J, Publications No.: TP-231, Jet Electronics and Technology, Inc.: 5353 52nd Street, S. E.; Grand Rapids, Michigan 49508.

(n) Pilot's Manual, Automatic Flight Control System, Model FC-110, Publication No. TP-223; Jet Electronics and Technology, Inc., 5353 52nd Street, S. E.; Grand Rapids, Michigan 49508.

(o) Overhaul Manual and Parts Breakdown, Vertical Gyro, Model VG-206, Publication No. TP-224; Jet Electronics and Technology, Inc. 5353 52nd Street S. E., Grand Rapids, Michigan 49508.

(p) Instruction Manual, Servo Amplifier, Model AM-101, Publication No. TP-236; Jet Electronics and Technology, Inc., 5353 52nd Street, S. E., Grand Rapids, Michigan 49508.

(q) Overhaul Manual, Rate Gyroscope, Model RG-227, Publication No. TP-264; Jet Electronics and Technology, Inc., 5353 52nd Street, S. E., Grand Rapids, Michigan 49508.

(r) Pilot's Guide, 3-D Digital Airborne Computer/R NAV System, Model DAC-2000, Publication No.: TP-257; Jet Electronics and Technology, Inc., 5353 52nd Street, S. E., Grand Rapids, Michigan 49508.

(s) Instruction Manual, 3-D Digital Airborne Computer/R NAV System, Model DAC-2000, Publication No.: TP-258; Jet Electronics and Technology, Inc., 5353 52nd Street, S. E., Grand Rapids, Michigan 49508.

(3) Electrical

(a) Instruction Manual, Marathon Battery, Publication No.: BA-89; Marathon Battery Co., 8301 Imperial Drive, P.O. Box 8233, Waco, Texas 76710.

(b) Instruction Manual, Gulton Battery, Publication No.: ABD 1100, Gulton Industries, Inc., Metuchen, New Jersey 08840.

(c) Service Manual, Gill Aircraft Batteries, Teledyne Battery Products, 840 W. Brockton Avenue, P.O. Box 431, Redlands, Calif. 92373.

(d) Installation and Maintenance Manual, Twilighter Mk. III, Publication No.: None; Hoskins, Inc., 34 N. Bennet, Geneva, Illinois 60134.

(e) Instruction Manual, Fuel Monitoring System Computer-Amplifier, Model CA-260, Publication No.: TP-210; Jet Electronics and Technology, Inc., 5353 52nd Street S. E., Grand Rapids, Michigan 49508.

(f) Instruction Manual, Nose Gear/Stall Warning Computer Amplifier, Model CA-250, Publication No.: TP-209; Jet Electronics and Technology, Inc., 5353 52nd Street S. E., Grand Rapids, Michigan 49508.

(g) Instruction Manual, Emergency Power Supply, Model PS-823, Publication No.: TP-202; Jet Electronics and Technology, Inc., 5353 52nd Street S. E., Grand Rapids, Michigan 49508.

(h) Maintenance Instructions, Bendix Starter-Generator, Publication No.: R709-18; Bendix Corporation, Electrical Power Division, Eatontown, New Jersey.

(i) Illustrated Parts List, Bendix Starter-Generator, Publication No.: R702-11; Bendix Corporation, Electrical Power Division, Eatontown, New Jersey.

(j) Instruction Manual, DC Torquer Actuator, Model SA-142, Publication No.: TP-201, Jet Electronics and Technology, Inc., 5353 52nd Street S.E., Grand Rapids, Michigan 49508.

(4) Engine

(a) General Electric "CJ610-1 thru -9 and CF700-2C and -2D and -202 Turbojet Engines Illustrated Parts Catalog," Publication No.: SEI-137; General Electric Company, Commercial Engine Division, Product Support Division, Lynn, Mass. 01910.

(b) General Electric "CJ610-1 thru -9 Turbojet Engine Operating Instructions," Publication No.: SEI-188; General Electric Company, Commercial Engine Division, Product Support Division, Lynn, Mass. 01910.

(c) General Electric "CJ610-1 thru -9 Turbojet Engines Maintenance Manual," Publication No.: SEI-186; General Electric Company, Commercial Engine Division, Product Support Division, Lynn, Mass. 01910.

(d) General Electric "CJ610-1 thru -9 Turbojet Engines Overhaul Manual," Publication No.: SEI-136; General Electric Company, Commercial Engine Division, Product Support Division, Lynn, Mass. 01910.

(e) General Electric "CJ610-1 thru -9 and CF700-2C Turbojet Engines Accessory Overhaul Manual, Publication No.: SEI-154; General Electricl Company, Commercial Engine Division, Product Support Division, Lynn, Mass. 01910.

(f) Handbook of Overhaul Instructions, Pressure Ratio Indicator, Publication No.: 5560-200-859; Kollsman Instrument Corp., 80-08 45th Ave., Elmhurst, New York 11373.

(g) Handbook of Overhaul Instructions, Pressure Ratio Synchrotel Transmitter, Publication No.: 5695A-500-961; Kollsman Instrument Corp., 80-08 45 Ave., Elmhurst, New York 11373.

(h) Installation Manual, Woodward Electronic Synchronizer (STC SA412CE), Publication No.: Bulletin 33071; Woodward Governor Co., 5001 N. Second St., Rockford, Illinois 61100.

(i) Installation Manual, Woodward Electronic Synchronizer (STC SA30GL), Publication No.: Bulletin 33104, Woodward Governor Co., 5001 N. Second St., Rockford, Illinois 61100.

(j) Installation Manual, Woodward Electronic Synchronizer (STC SA30GL), Publication No.: Bulletin 33144, Woodward Governor Co., 5001 N. Second St., Rockford, Illinois 61100.

(k) Instruction Manual, Fire Extinguisher Cartridges and Fire Extinguisher Actuator, Publication No.: F40712B; Walter Kidde & Co., Inc., Belleville, New Jersey 07109.

(l) Instruction Manual, Double Check Valve Tee (Fire Extinguisher), Publication No.: F-40671; Walter Kidde & Co., Inc., Belleville 9, New Jersey.

(m) Overhaul Manual and Illustrated Parts Catalog, 86 Cubic Inch Fire Extinguisher Container Assemblies, Publication No. 26-20-00 and Bulletin No. 30402102; American Standard, Advanced Technology Division, 1900 Walker Avenue, Monrovia, California 91016.

(5) Miscellaneous

(a) Service and Maintenance Manual Flush Type Toilet, Publication No. 107A; Monogram Industries, Inc., Venice Division, Venice, California 90291.

(b) Service Instructions Manual, Sherwood Clean Flush Aircraft Toilets; Sherwood Products, P.O. Box 32583, San Antonio, Texas 78216.

(c) Operation and Maintenance Instructions for Aircraft Electronic Weighing Kits, Publication No. C-40468, Cox and Stevens Electronic Scales Division, Revere Corporation of America, Wallingford, Connecticut.

(d) Service Manual Maintenance Instructions with Illustrated Parts Breakdown and Circuit Diagrams for Dee Howard Company Thrust Reverser System used on Gates Learjet Aircraft. The Dee Howard Company, San Antonio, Texas 78201.

(6) Wheels, Tires, Brake, and Anti-Skid

(a) Nose Wheel Assembly, Main Wheel Assembly, and Brake Assembly Overhaul Manual and Illustrated Parts Catalog, Publication No.: AP-319, The Goodyear Tire and Rubber Company, Aviation Products Division, 1144 E. Market Street, Akron, Ohio 44300.

(b) Wheel Speed Transducer Assemblies Overhaul Manual, Pub. No. 32-40-02 (Report 8155), Component P/N 40-433L; Hydro-Aire Company, Division of Crane Company, 3000 Winona Avenue, Burbank, California 91510.

(c) Wheel Speed Transducer Assembly Overhaul Manual, Pub. No. 32-40-77 (Report 8-297), Component P/N 40-911; Hydro-Aire Company, Division of Crane Company, 3000 Winona Avenue, Burbank, California 91510.

(d) Anti-Skid Control Box Overhaul Manual, Pub. No. 32-40-76 (Report 8157), Component P/N 42-201; Hydro-Aire Company, Division of Crane Company, 3000 Winona Avenue, Burbank, California 91510.

(e) Anti-Skid Control Box Overhaul Manual, Pub. No. 32-42-32 (Report 8-300) Component P/N 42-379-1; Hydro-Aire Company, Division of Crane Company, 3000 Winona Avenue, Burbank, California 91510.

(f) Dual Pressure Control Valve Overhaul Manual, Pub. No. 32-42-28 (Report 8-151), Component P/N 39-149; Hydro-Aire Company, Division of Crane Company, 3000 Winona Avenue, Burbank, California 91510.

(g) Dual Pressure Control Valve Overhaul Manual, Pub. No. 32-43-33 (Report 8-301), Component P/N 39-309-1; Hydro-Aire Company, Division od Crane Company, 3000 Winona Avenue, Burbank, California 91510.